

**National Park Service  
U.S. Department of the Interior**



## **CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA GEORGIA**

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**Gold Branch Paving Proposal**

**DRAFT ENVIRONMENTAL ASSESSMENT /ASSESSMENT OF  
EFFECT**

September 16, 2004

September 24, 2004

Dear Interested Party;

The enclosed Environmental Assessment (EA) evaluates effects of a proposal to pave the entrance road to Gold Branch Unit on the Chattahoochee River National Recreation Area. The paving is necessary because storm water runoff from Lower Roswell Road has destabilized the gravel road surface. Public comments on this document will be accepted during a 30-day period ending on October 24, 2004. Please send written comments to:

Superintendent  
Chattahoochee River National Recreation Area  
1978 Island Ford Parkway  
Atlanta Georgia 30350-3400  
Fax: (770)  
E-mail: [CHAT\\_Superintendent@nps.gov](mailto:CHAT_Superintendent@nps.gov)

Written comments must be received by 9:00 a.m. on October 24, 2004. A copy of the decision on this project will be distributed to those who provide comments on the EA and to those who specifically request to receive a copy.

Thank you for your interest in Chattahoochee River National Recreation Area.

Sincerely,

Kevin G. Cheri  
Superintendent

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## **BACKGROUND AND NEED FOR THE PROPOSAL**

### **Purpose and Need**

During the spring of 2004 North Georgia experienced extraordinary amounts of precipitation. Portions of Chattahoochee River National Recreation Area (CRNRA) received record or near-record rainfall. The entrance road to the Gold Branch Unit (Figure 1) has a steep grade and funnels water off Lower Roswell Road. Areas of the entrance road with gravel surfaces were deeply rutted due to heavy rains. The gravel has been replaced several times over the last five years, resulting in movement of gravel downhill onto an access road for a pumping station and a wetland. This summer 2004, the Gold Branch unit was temporarily closed until the road could be graded. The continual damage to the road is expensive to repair and poses a serious safety risk. Without management action, a single heavy rain event could further damage or destroy the road, making facilities at Gold Branch inaccessible to the public and utilities managers in addition to further damaging park resources.

Gold Branch is a popular site for visitors to CRNRA. Park maintained facilities include the entrance road, a parking area and trails. Gold Branch trails provide vistas of and access to Bullsluice Lake. In addition, the water pumping station located on the Chattahoochee River at Gold Branch is accessed through a gate at the bottom of the National Park Service (NPS) access road. Complaints of gravel on this lower road have been received by the park.

The problems with the entrance road are not new. Planning was initiated over 5 years ago. Concerns over safety and coordination with the county over the requirements for the entrance road slowed the planning process. No Environmental Assessment (EA) or other National Environmental Policy Act (NEPA) documentation was prepared at that time. CRNRA modified the plans based on scoping, resulting in several different sets of alternatives. Therefore, this EA represents a new NEPA process.

CRNRA needs to provide safe access to the Gold Branch Unit for visitor and management purposes in such a manner as will minimize impacts on natural resources, including wetlands and the floodplain. Photographs 1- 10 document the resource damage. Photographs 11-14 document the potential hazards to park visitors of turning into and out of the park entrance off a steep slope.

### **Objectives**

The objectives of the proposed action are to:

1. Stabilize the road surface to reduce potential erosion and downslope deposition of gravel
2. Improve the safety of the entrance to the Gold Branch Unit
3. Control storm water runoff

Direction for management actions regarding roads comes from the *Chattahoochee River National Recreation Area General Management Plan and Environmental Impact Statement* (NPS, 1989) and NPS Policies (2001).

The decision to be made in regard to this EA is to:

- not implement the project (No Action), or
- implement the Proposed Action as described in this document.

## **Issues and Concerns**

The primary scoping process consisted of an interdisciplinary team (IDT) who defined the issues and preliminary alternatives to be examined in the EA. Additional specialists' reports and analysis documents are contained in the analysis file and are hereby incorporated by reference.

**Issue 1:** Safe access to and from the entrance to the unit. The entrance road is very close to a turnout for a nearby housing development. Increasing visibility at the entrance along Lower Roswell Road would improve visitor and staff safety.

**Issue 2:** The road prism has created an unnatural channel for water flowing off Lower Roswell Road. The alterations to the natural hydrologic flow due to housing and the increase in impermeable surfaces upslope has likely contributed to destabilization of the access road to Gold Branch and to the water pump station. Flows down the access road increasingly exceed those expected for a "natural" disturbance regime. Creating drains in the access road and channeling runoff to a side area for percolation may only move the problem of erosion.

**Issue 3.** The entrance road has an unstable gravel surface which has resulted in repeated road failures that are expensive to repair. A permanent "fix" seems unlikely without attention to the drainage problems (see Issue 2) and establishment of a less mobile road surface.

**Issue 4.** A large oak stands along side the entrance road. Concerns have been raised that the oak would be damaged by paving the road within the drip zone of the tree.

**Issue 5.** The area where the storm water overflow is to be piped contains 10 trees with 20-30 inch dbh. Destroying these would alter the habitat.

**Table 1. Summary of Impact Topics.**

<b>Impact Topic</b>	<b>Retained or dismissed from further evaluation</b>	<b>Relevant Laws, Regulations or Policies</b>
Soils	retained	Georgia Erosion and Sedimentation Act of 1975; Georgia Erosion and Sedimentation Act [amended 2000]; NPS Organic Act; <i>NPS Management Policies</i>
Air Quality	dismissed	Clean Air Act (CAA); CAA Amendments of 1990; NPS Organic Act; <i>NPS Management Policies</i> ; Georgia State law
Water Resources	retained	Clean Water Act; Safe Drinking Water Act; Executive Order 12088; Fish and Wildlife Coordination Act; National Park Service Organic Act; Metropolitan Rivers Protection Act; Georgia Water Quality Control Act; <i>NPS Management Policies 2001</i>
Vegetation	retained	NPS Organic Act; <i>NPS Management Policies</i> ; Executive Order 13112 of 1999 <i>Invasive Species</i> ; NPS Director's Order 77-7, <i>Integrated Pest Management</i>
Floodplains and Wetlands	retained	Executive Order 11988; Executive Order 11990; Rivers and Harbors Act; Clean Water Act; NPS Organic Act; <i>NPS Management Policies</i> ; Metropolitan Rivers Protection Act, DO #77-1, <i>Wetland Protection</i>
Wildlife	retained	NPS Organic Act; Fish and Wildlife Coordination Act; Executive Order 13186, <i>Migratory Birds</i> ; Migratory Bird Treaty Act; Metropolitan Rivers Protection Act; Georgia Water Quality Control Act; <i>NPS Management Policies</i>
Threatened, Endangered, or Sensitive Species	retained	Endangered Species Act; NPS Organic Act; Georgia endangered species and related wildlife statutes; Migratory Bird Treaty Act; Fish and Wildlife Coordination Act; Bald and Golden Eagles Protection Act; <i>NPS Management Policies</i>
Recreation Resources	retained	Americans with Disabilities Act; NPS Organic Act; <i>NPS Management Policies</i>
Cultural Resources	retained	Section 106 of National Historic Preservation Act; Archeologic and Historic Preservation Act; Archeological Resources Protection Act; National Environmental Policy Act; Native American Graves and Repatriation Act; 36 CFR 800; Executive Order 13007; Executive Order 11593; the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation; Programmatic Memorandum of Agreement Among the NPS, Advisory

		Council on Historic Preservation, and the National Council of State Historic Preservation Officers ((1995); NPS <i>Management Policies</i> ; Director's Order 28, <i>Cultural Resource Management Guideline</i> ; Director's Order 12, <i>Conservation Planning, Environmental Impact Analysis, and Decision Making</i>
Noise	Dismissed	NPS <i>Management Policies</i> ; Director's Order 47, <i>Sound Preservation and Noise Management</i>
Waste Management	Dismissed	NPS <i>Management Policies</i>
Prime and Unique Farmlands	Dismissed	Council on Environmental Quality 1980 memorandum on prime and unique farmlands

**Table 2: The Degree to Which Each Alternative Meets Objectives**

Objective	Alt. 1 - No-Action	Alt. 2 – Pave Road
Stabilize the road surface to reduce potential erosion and downslope deposition of gravel	Continued use of gravel will not stabilize road and reduce erosion and deposition of gravel.	Removal of gravel and paving of road will stabilize road surface and reduce potential erosion.
Improve visibility and safety of the entrance to the Gold Branch Unit	Visibility and safety will not be improved.	Visibility will be improved by removing low limbs and clearing shrubs.
Control storm water runoff	Storm water will not be controlled.	Storm water will be controlled with installation of drain system.

**Table 3: Comparison of Alternatives**

Issue	Alt. 1 – No- Action	Alt. 2 – Pave Road
Safe access to and from the entrance to the unit.	No change	Visibility would improve.
Storm water flowing off Lower Roswell Road creates instability	No change	Storm water runoff would be controlled.
Unstable gravel results in repeated road failures	No Change	Road stability Improved
Damage to a large oak along side the entrance road.	No Change	Could affect drip zone of tree.
Damage to 10 trees in area of storm water basin	Indirect damage by smothering roots	Direct damage from cutting or crushing roots or felling

**Table 4: Summary Comparison of Alternatives and Impacts**

Impact Topic	Alt. 1 – No- Action	Alt. 2 – Pave Road
<b>Soils</b>	The adverse direct impacts of no action to prevent erosion would be localized, long-term, and minor to moderate. Cumulative effects would be localized and minor to moderate. This alternative would not result in impairment of soils.	The direct beneficial effects of a drain system to reduce erosion of soils would be localized, long-term, and minor to moderate. Cumulative effects would be negligible. This alternative would not result in impairment of soils.
<b>Water Resources</b>	The adverse direct impacts of erosion on the drainages within the Chattahoochee River watershed would be localized, long-term, and minor. Cumulative effects of erosion would be adverse localized and minor. This alternative would not result in impairment of water resources.	The direct beneficial effects of reducing overland flows and erosion would be localized, long-term, and minor. Cumulative effects of reducing erosion would be beneficial and minor. This alternative would not result in impairment of water resources

Impact Topic	Alt. 1 – No- Action	Alt. 2 – Pave Road
<b>Vegetation</b>	The adverse direct impacts would be long-term, and minor. Cumulative effects would be adverse localized and negligible to minor. This alternative would not result in impairment of vegetation.	The adverse direct impacts of paving and construction of basin would be localized, long-term, and minor. Indirect effects would be beneficial localized, long-term, minor. Cumulative effects would be adverse localized and minor. This alternative would not result in impairment of vegetation.
<b>Floodplains and Wetlands</b>	The adverse direct impacts of erosion and alteration of surface hydrology would be localized, long-term, and minor to moderate. Indirect effects of sedimentation would be adverse, localized, long-term, and minor. Cumulative effects of continued erosion and sedimentation would be localized and minor. This alternative would not result in impairment of floodplains or wetlands.	The adverse direct impacts of paving the road would be confined to the existing road prism, long-term, and negligible to minor. Indirect beneficial effects of restoring surface hydrology and reducing inputs of gravel into the water shed would be localized, long-term, and minor. Cumulative effects of reducing deposition of gravels would be beneficial localized and minor. This alternative would not result in impairment of floodplains or wetlands.
<b>Wildlife</b>	The adverse direct impacts of deposition of gravels in depressions and downslope would be localized, long-term, and negligible to minor. Indirect effects on habitat would be adverse, localized, long-term, and minor. Cumulative effects would be adverse, localized and negligible to minor. This alternative would not result in impairment of wildlife.	The adverse direct impacts of permanently paving the existing road would be localized, long-term, and negligible. Indirect effects of the paved road as a barrier would be long term localized and negligible. Cumulative effects would be beneficial and adverse, localized, and negligible. Beneficial effects would accrue from restoration of habitat down slope from the road. This alternative would not result in impairment of wildlife.



Impact Topic	Alt. 1 – No- Action	Alt. 2 – Pave Road
<b>Threatened, Endangered, and Sensitive Species</b>	The adverse direct and indirect impacts would be localized, long-term, and negligible. Cumulative effects would be adverse, localized and negligible. The determination of the National Park Service is that, depending on the species, the no-action alternative would have <i>no effect</i> or <i>may effect, but is unlikely to adversely effect</i> threatened, endangered, or sensitive species. This alternative would not result in impairment of threatened, endangered, or sensitive species.	The adverse direct and indirect impacts would be localized, long-term, and negligible. Cumulative effects would be adverse or beneficial, localized and negligible. The determination of the National Park Service is that, depending on the species, the no-action alternative would have <i>no effect</i> or <i>may effect, but is unlikely to adversely effect</i> threatened, endangered, or sensitive species. This alternative would not result in impairment of threatened, endangered, or sensitive species.
<b>Recreation Resources</b>	The adverse direct and indirect impacts of having a washed out road would be localized, long-term, and minor. Cumulative effects of a rutted road would be adverse long term localized and minor. This alternative would not result in impairment of recreation resources.	The adverse direct impacts of paving the road would be localized, short-term, and negligible. The beneficial effects of paving the road would be long term, minor and localized. Cumulative effects would be localized negligible to minor, and beneficial. This alternative would not result in impairment of Recreation Resources.
<b>Cultural Resources</b>	No adverse effect on cultural resources would result. This alternative would not result in impairment of Cultural Resources.	No adverse effect on cultural resources would result. This alternative would not result in impairment of Cultural Resources.

## **PROPOSED ACTION AND ALTERNATIVES**

Two alternatives are fully analyzed in this EA: 1) No Action; and 2) pave existing road bed. The site location is shown on maps in Appendix 1.

Four additional alternatives were considered, but rejected:

Closure of the unit was rejected at this time because it does not meet the need to provide access for visitor and administrative purposes. A second alternative, widening the entrance road and a third, re-grading the road to establish a grade of less than 4% were rejected at this time due to lack of funds and potential effects on natural and cultural resources. Putting an entrance island with sign was rejected during early scoping due to objections over damage to the large oak tree.

### **Alternative 1: No Action**

Under this alternative, no action would be taken to provide a paved entrance road (Figure 2). The park would continue to bring in gravel and re-grade the road. The visibility from the road would not be improved. Overland flow down the access road would continue to erode and transport gravel downslope, natural resource degradation would continue as the gravel moves into low lying wetlands (Figure 2).

### **Alternative 2. Pave existing road bed.**

Under this alternative, the entrance road would be paved. Visibility would be improved by thinning invasives and small trees at the entrance off Lower Roswell Road. The current roadway would have drains placed along its length to channel water off the road into a side depression to reduce overland flow and erosion. The project would likely occur during the winter of 2004, although it is possible that work would begin as late as May 2005. The work would be accomplished under contract.

The entire paved road would be approximately 700 feet in length and essentially the same length and width as the current road segment. The paving would be within the existing road prism. There would be an increase in impervious surface due to the paving of the road. However, dispersal of the overland flow of water to allow percolation would improve surface hydrology.

No large trees (over 15 inches dbh) would be removed from the entrance area near Roswell Road. Smaller trees will be thinned to improve visibility. Privet and kudzu dominate the vegetation in the area to be thinned (Figure 3) along the road. The drip zone of one large oak would be affected. Mitigation would include flagging the drip zone and minimizing the time heavy machinery is in this section to reduce damaging the root system. The reduction in area to absorb water could be offset by maintaining an invasive exotic free zone around the oak to reduce competition for water and nutrients.

A storm water basin would be constructed in the area indicated (Figure 3). The water drained off the road would be piped to this basin, ascend through a riser and be dispersed through an aerator. A flow of 0.01 feet<sup>3</sup> per sec through the 24 inch pipe would be expected when 1.5 inches of rain fall in one day. This magnitude of rain occurred five percent of the time in the past year. As this water would come up the riser the velocity would slow; lowering the erosion capability. Rocks surrounding the riser would further absorb energy from the storm water. The area currently contains a depression filled with sediment and gravel from the road and less than ten large trees. Vegetation is scarce in this area. Most trees in the depression are under 15dbh. The path for the pipe would minimize potential loss of trees. The area around the riser would be surrounded by stone and native grasses would be seeded in the vicinity to further stabilize soils. An area of roughly 100 feet<sup>2</sup> or less would be used for this basin it would be narrowed if needed to avoid major trees.

Over the construction period of one week, the following equipment would likely be used for these estimated hours. It is estimated that during 80% of the construction period, only one piece of heavy equipment would be operating at a particular time. Equipment would likely be operating for no more than 8 hours each day. No equipment would be operated after 6 pm or before 7 am to minimize the impact of noise on park neighbors. All equipment would be maintained in good operating condition and checked daily to insure that engine fluids do not leak.

<b>Equipment</b>	<b>Hours of Operation</b>
30,000 lb dozer	15 hours
30,000 lb loader	20 hours
22-yard truck/trailer	40 hours

Through the length of the existing roadbed (see Figure 3), a 12-inch trough would be placed along one side to collect storm water. At approximately 50-foot intervals along the length of the road, drains with grids would be built to provide drainage under the road.

#### General Design Features and Mitigations of Proposed Paved Road

- Current road alignment will be adhered to. All paving will be within the existing road prism.
- All construction activities would be in conformance with the Best Management Practices for maintaining water quality and minimizing erosion and soil compaction as provided by NPS Policies 2001, Federal, Georgia State and local laws.
- The contractor shall re-grade road to typical cross-section details (to be provided) to insure drainage to the side of the road.

- A water line underlies the road and care will have to be taken during any regarding not to dig to the depth of the water line.
- The contractor will pave over an existing gravel road as listed below and in the Scope of Work.
- The contractor shall install a minimum 6" layer of (3/4" stone) as an aggregate base course and a 3 inch full depth of asphalt paving; consisting of a 1 ½ inch base course and a 1 ½ inch wear course (to be specified).
- The contractor shall surface the road with asphalt to the edge of the parking area.
- The contractor shall surface the road with asphalt to the bottom edge of the timber retaining wall on one side of the road and to a cement drain on the other side. The road is to be sloped at 2 % grade towards the drain (specifics to be provided).
- No centerline marking to be painted on entrance road.
- The contractor shall grade the entrance road to provide a smooth even transition between the finish grades of all adjoining roads and the finish grade of the new asphalt surfacing.
- All curbs will be set back 2 feet from edge of road.
- Curbs will be used to channel water into drains along side of road (specifics to be provided).
- The river and downhill areas would be protected with silt fencing during construction to prevent silt from entering the Chattahoochee River. All Cobb County and Georgia State regulations will be followed.
- A catch basin (location specifics to be provided) would be created to trap the water and facilitate natural filtration.
- Long-term, storm-water drainage from the entrance road would be directed through pipes to this catch basin. A riser pipe would disperse the storm water into the basin. A combination of stones and natural vegetation would assist percolation into subsurface flows instead of the overland flows currently occurring. This would improve surface hydrology patterns for the Chattahoochee River and its floodplain in the vicinity of the entrance road.
- Silt fences would be placed along the length of both reroutes on both sides of the 40-foot wide construction area to contain any silt produced. These silt fences would be 3-feet high with 8 inches buried. The silt fences would be checked daily during construction to ensure their effectiveness. Any captured silt would be removed and transported to an appropriate storage area off-site, such as the maintenance compound, prior to dismantling the fences.
- All parts of the paved area will have drains across the road spaced no more than 50 ft. apart (specifics to be provided). The road will also be sloped toward one edge with the main drains.
- Any in/near wetlands work involving heavy equipment will be subject to State and Federal Law governing petroleum spill prevention and cleanup.
- All disturbed areas will be seeded with a NPS-approved erosion control/wildlife mix of native species, fertilized, and mulched with weed free mulch.
- Information regarding access through the proposed project area will be provided to the public, as appropriate, through signs or maps.

- Road construction and reconstruction activities generating noises above ambient levels will be timed to occur during the hours of 7 AM - 5 PM, Monday through Saturday.
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## **AFFECTED ENVIRONMENT AND ASSESSMENT OF EFFECTS**

### **Methodology for Assessing Impacts**

Applicable and available information on known natural and cultural resources was compiled. Alternatives were evaluated for their effects on the resources and values determined during the scoping process. The impact analyses were based on professional judgment using information provided by park staff, relevant references and technical literature citations, and subject matter experts. For each impact topic, the analysis includes a brief description of the affected environment and an evaluation of effects. Potential impacts are described in terms of type (beneficial or adverse), context (site-specific, local, or even regional), duration (short-term or long-term), and intensity (negligible, minor, moderate, or major or impairment of Chattahoochee River NRA's resources and values).

When appropriate, mitigation measures have been identified that may be employed to offset or minimize potential adverse impacts.

Definitions of intensity levels varied by impact topic, but, for all impact topics, the following definitions were applied.

*Beneficial:* A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

*Adverse:* A change that moves the resource away from a desired condition or detracts from its appearance or condition.

*Direct:* An effect that is caused by an action and occurs in the same time and place.

*Indirect:* An effect that is caused by an action but is later in time or farther removed in distance but is still reasonably foreseeable.

*Short-term:* An effect that within a short period of time would no longer be detectable as the resource is returned to its predisturbance condition or appearance. Short-term impacts, depending on impact topic, may range from a few hours up to five years (see table below).

*Long-term:* A change in a resource or its condition that does not return the resource to predisturbance condition or appearance and for all practical purposes is considered permanent.

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## **Monitoring of Proposed Action**

Most compliance monitoring would be performed by the Project Inspector for the ensuing contract. Contract administrators would monitor the site as the work is performed to ensure that all contract stipulations are met. If a problem arises due to adverse environmental impacts that were not anticipated by the Interdisciplinary Team (IDT), the problem would be brought to the attention of the contracting officer's representative and the appropriate resource specialist. During the contract, the project site may also be periodically reviewed on the ground by resource specialists, and any necessary changes may be applied to correct resource problems.

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## **ENVIRONMENTAL IMPACTS**

Impacts to the following critical elements were considered, as well as impacts to other park resources. Only those elements that show a potential impact are discussed further in this EA.

- Ethnographic Resources: no effect
- Cultural/Historic Resources: no effect
- Ecologically Sensitive Areas: no effect
- Soils: discussed below
- Vegetation: discussed below
- Wildlife: discussed below
- Threatened and Endangered Species: discussed below
- Water Resources: discussed below
- Floodplains: discussed below
- Hazardous/Solid Wastes: discussed below
- Recreation Resources: discussed below
- Cultural Resources

## **SOILS**

### **Affected Environment.**

Soils at Gold Branch vary between upland and bottomland areas. Upland soils are generally sandy loams. Soils are deep and moderately drained in many upland areas. However, upland soils are generally highly erodible and have experienced severe erosion in the past. On steep slopes soils tend to be shallow. As a result of the high erosion potential, removal of all vegetation has the potential to cause erosion. The floodplain soils in the park are generally deep and include sandy clay, sandy, or silty clay loams. These soils are also highly erodible and at times are flooded.

## **Alternative 1. No Action**

Storm water runoff from Roswell Road causes erosion of soils and gravel from the road bed and downhill areas. Sediments are deposited further downhill. The adverse direct impacts of no action would be localized, long-term, and minor.

### **Cumulative Effects**

Cumulative effects at Gold Branch would be localized, long-term and minor. Region wide erosion of soils was substantial during the early part of the twentieth century. Recently, erosion of soils throughout the region due to land clearing and altered overland flow of storm waters has had an adverse moderate long term effect on soils.

This alternative would not result in impairment of soils.

## **Alternative 2. Pave existing road bed.**

Paving the road surface would stabilize the road and channel water. Providing drains would control storm runoff and taken together with the stabilized road would halt the erosion currently occurring. The direct beneficial effects of road paving on soils would be localized, long-term, and minor.

### **Cumulative Effects**

Cumulative effects at Gold Branch would be localized, long-term and minor. Region wide erosion of soils was substantial during the early part of the twentieth century. Recently, erosion of soils throughout the region due to land clearing and altered overland flow of storm waters has had an adverse moderate long term effect on soils.

This alternative would not result in impairment of soils.

## **VEGETATION**

### **Affected Environment.**

The general forest type for CRNRA is oak-hickory. Kuchler (1964) mapped similar areas' vegetation as oak-hickory-pine forest, southern floodplain forest, or southern mixed forest. Principal species include loblolly pine, sweet gum, yellow poplar, pignut hickory, mockernut hickory, water oak, red maple, southern red oak, northern red oak, and white oak.

Riparian areas along the Chattahoochee River and its many seasonally flooded and wetland habitats contribute to a diversity of habitats. Southern floodplain forests contain tupelo, black gum, sweet gum, oaks, or southern cypress. Combined these species represent over 50 percent of the trees. Common associates include river birch, cottonwoods, willows, ashes, elms, hackberry, and maples. This forest type

converts to oak-pine where hardwoods dominate, but pines make up 25-49 percent of the trees. Large river floodplain and levee forests, small stream floodplain forests, alluvial ravine forest, and many herbaceous alliances are associated with the river. Grasslands occur along the easement at Gold Branch.

Georgia aster, a US Fish and Wildlife Service-designated Candidate species, occurs in the Gold Branch Unit. However, within the area to be affected by this proposed project, no federal or state listed threatened or endangered plant species are known to occur. Field surveys indicated that no sensitive plant species were present. A field survey was conducted in the surrounding area. The area within the road prism to be paved and the areas at the entrance and around the parking area are previously disturbed. Privet and kudzu, both exotics, are the dominant vegetation at the entrance next to Lower Roswell Road. Trees present in the entrance area are small and common species (sweet gum) in disturbed areas. Along the road a large oak occurs. The entrance is kept mowed. In the area where the storm water basin is to be placed, several large trees (> 20 dbh) of yellow poplar and pine occur.

### **Alternative 1. No Action**

There would be no new human-caused disturbance to the vegetation on this site resulting from selection of this alternative. It is likely that without the construction of a system of drains that drainage would continue to erode the road, causing further impacts from downhill movement of water and gravel into the floodplain. Vegetation is sparse in the area currently affected by sedimentation. Herbaceous plants would continue to be smothered during heavy rains and subsequent deposition of gravels. This would have a long term negative local minor effect on vegetation below the road.

### **Cumulative Effects**

This alternative is contributing to the cumulative effects that alteration in land use and management practices have had on individual plant species and vegetation in the region. Erosion of soils and sedimentation of depressions eliminates habitat for plants. Urbanization and removal of woodland habitat has had a major impact on vegetation in the region. Plant species requiring fire or seasonal flooding are rare due to current land and river management practices in the region. The cumulative effects that disturbances and shifts in land use have had on vegetation are regional, long-term, major and negative.

This alternative would not result in impairment of vegetation.

### **Alternative 2. Pave existing road bed.**

Vegetation at the entrance to the unit (see Figure 3) would need to be thinned and heavily pruned within eight feet of the ground. Most of this vegetation is privet, an exotic, with some sweet gum, a common tree. In the area of the storm water basin, up to 5 trees greater than 20"dbh could have their roots damaged by trenching or



machinery. This would have a long term negative local negligible effect on vegetation below the road. A large oak growing close to the road could have reduced ability to take up water and nutrients due to paving of a part of its drip zone. Indirect effects of paving on vegetation would be negative long-term and negligible.

### **Cumulative Effects**

This project would not be expected to contribute to the cumulative effects that alteration in land use and management practices have had on individual plant species and vegetation in the region. Urbanization and removal of woodland habitat has had a major impact on vegetation in the region. Plant species requiring fire or seasonal flooding are rare due to current land and river management practices in the region. The cumulative effects that disturbances and shifts in land use have had on vegetation are regional, long-term, major and negative.

This alternative would not result in impairment of vegetation.

## **WILDLIFE**

### **Affected Environment**

Mammals commonly seen in the Gold Branch area include white-tailed deer, raccoon, grey squirrel, and beaver. Less common, but present, are coyote, and otter. Smaller, less conspicuous or nocturnal mammals are numerous. No bats have been recorded from this area but results from a recent bat study are not available yet. Conspicuous birds in the area include great blue heron, osprey, blue jay, kingfisher, crow, robin, warblers, woodpeckers, and sparrows. Many of the amphibians and reptiles reported for the park probably occur on the Gold Branch Unit because of its proximity to Bull Sluice Lake and Willieo Creek.

Though no systematic and detailed field surveys have been conducted at the Gold Branch Unit, the area has habitat for and likely contains numerous invertebrate species, such as insects, arachnids, slugs and snails. The power-line easement contains diverse species of butterflies, dragonflies and damselflies.

### **Alternative 1. No Action**

No changes in land use would occur under this alternative. However, sedimentation fills in areas close to wetland areas which would negatively affect amphibians. Amphibian habitat would be altered by shifting the substratum from soils to gravel; by smothering underground homes or reducing the dampness of soils for species with high humidity requirements. There would be negligible, local, long- term effects on wildlife resulting from this alternative.

## Cumulative Effects

This alternative would have a negligible negative effect on wildlife. A small area is influenced by gravel and sediments. Large and small scale alterations in land use and management practices have had enormous effects on habitat and connectivity of habitats for many wildlife species in the region. The cumulative effects that disturbances and shifts in land use have had on wildlife are regional, long-term, major and negative.

This alternative would not result in impairment of wildlife.

### **Alternative 2. Pave existing road bed**

During construction there would be temporary disturbance of wildlife in the immediate vicinity, but this disturbance would last for two months at most. Negligible short term localized effects to wildlife from construction would be expected. The area of the storm water basin is approximately 100 feet<sup>2</sup>. This is a small area for most wildlife.

No trees containing suitable grey bat roosting areas would be removed. No effects on this species are expected to occur.

Since there are no known bald eagle wintering concentrations or nest sites within the project vicinity, no effects on this threatened species would be expected.

## Cumulative Effects

This alternative would have a negligible negative effect on wildlife. A small area downhill from the road where the pipe would go is already disturbed by gravel and sediments. Large and small scale alterations in land use and management practices have had enormous effects on habitat and connectivity of habitats for many wildlife species in the region. The cumulative effects that disturbances and shifts in land use have had on wildlife are regional, long-term, major and negative, however impacts from this alternative would be negligible.

This alternative would not result in impairment of wildlife.

## **Water Resources**

### **Affected Environment**

At present, rain on the entrance road forms rivulets down the road which erode and transport gravel downslope. This over land flow of water needs to be channeled and permitted to percolate into the ground as it would have done naturally in the absence of disturbance. As a result of alterations to surface hydrology, heavy rains cause

significant erosion and downslope deposition of gravels and sediments.

### **Alternative 1. No Action**

In the vicinity of the project sites, the surface flows would continue to seek new channels and likely continue the movement of gravel towards the Chattahoochee River. The erosion of the road and downslope areas would likely continue as a result of the altered hydrology. Effects on surface hydrology would be minor, localized and long-term.

Direct and indirect effect of re-grading an unstable road surface in riparian areas or the steep slopes found in the park would be localized, long-term, and minor.

#### **Cumulative Effects**

This project would result in negligible alterations in surface hydrology within the Chattahoochee River watershed. Cumulative effects of alterations to surface hydrology in the watershed are major, regional, negative and long term.

This alternative would not result in impairment of water resources.

### **Alternative 2. Pave existing roadbed**

Proper use and maintenance of silt fencing, settling ponds and other sediment control measures would prevent sediment from entering the river during construction. Vehicles would be maintained in good operating condition to prevent leaks of fluids into the ground water and thus into the river. Paving would be done during the drier time of year (not spring) to avoid leachates moving into the groundwater.

Hardened, or impervious, surfaces result in an increase in the amount of storm water and the rate at which that water drains from an area. There would be a net impervious surface increase of approximately 7000 square feet resulting in some additional storm water runoff, although not a large increase. Drainage structures combined with a holding basin to allow storm runoff to percolate into the soil would likely result in decreased impacts of storm water runoff on water quality and quantity. Long-term, storm water runoff would be managed to prevent, or minimize, sediment entering the river. Drainage would be directed through cement channels to natural settling areas where natural vegetation would filter sediment out before the water reached the Chattahoochee River.

#### **Cumulative Effects**

This project would result in a negligible increase of impervious surface within the Chattahoochee River watershed. Cumulative effects of increasing impervious surfaces in the watershed are major, regional, negative and long term.

This alternative would not result in impairment of water resources.

## THREATENED, ENDANGERED, AND SENSITIVE SPECIES

### Affected Environment

A U.S. Fish and Wildlife Service website for the State of Georgia and the Georgia Natural Heritage records identify a large number of threatened, endangered and/or sensitive species which may exist in Cobb County. Table 6 below shows all federally listed endangered, threatened, candidate, or Species of Management Concern species whose range overlaps the park. In addition, those species the State of Georgia has listed as endangered, threatened, rare or unusual, and which potentially occur on the Gold Branch Unit are included.

Table 6. Federal, and Georgia State endangered, threatened or species of concern for Cobb County ([http://athens.fws.gov/endangered/counties/cobb\\_county.html](http://athens.fws.gov/endangered/counties/cobb_county.html)).

Common Name	Scientific Name	Federal Status	State Status
<b>Animals</b>			
Bald eagle	<i>Haliaeetus eucocephalus</i>	Threatened	Endangered
Bluestripe shiner	<i>Cyprinella callitaenia</i>	Species of Mgt Concern	Threatened
Highscale shiner	<i>Notropis hypsilepis</i>	None	Threatened
Four-toed salamander	<i>Hemidactylium scutatum</i>	None	Special Concern
Webster's salamander	<i>Plethodon websteri</i>	None	Special Concern
<b>Plants</b>			
Michaux's sumac	<i>Rhus michauxii</i>	Endangered	Endangered
Georgia aster	<i>Aster georgianus</i>	Candidate	Special concern
Open-ground whitlow-grass	<i>Draba aprica</i>	None	Endangered
Bay star-vine	<i>Schisandra glabra</i>	None	Threatened
Monkey-face orchid	<i>Platanthera integrilabia</i>	None	Threatened
Indian olive	<i>Nestronia umbellula</i>	None	Threatened
Pink lady slipper	<i>Cypripedium acaule</i>	None	Unusual
Yellow lady slipper	<i>Cypripedium calceolus</i>	None	Unusual

Bluestripe shiners are endemic to the Apalachicola River drainage in Florida, Alabama, and Georgia. They occur in the upper and middle Chattahoochee and middle Flint rivers, lowermost parts of their tributaries, and upper Apalachicola River. The shiners find habitat in the riffles and runs of large streams and rivers with rubble or sand substrates. They were formerly present at shoals which are now inundated by fifteen large impoundments (NatureServe 2003). These fish may be present in the park as the river has natural shoals.

Highscale shiners occur in the Chattahoochee River drainage and its biggest threat may be sedimentation. This shiner requires streams flowing over bedrock and sand substrates (NatureServe 2003). It prefers small to medium-sized creeks and small rivers often near stream mouths (NatureServe 2003). These fish may be present on the park as the river has natural shoals.

Four-toed salamander occurs in swamps, boggy streams and ponds, and wet woods (Pauley et al. 2000). This species, which is rare in Georgia, was not found during surveys of Chattahoochee River NRA but probably occurs within riparian areas within the park (Whit Gibbons 2003, Savanna River Ecology Laboratory and University of Georgia, personal communication).

Webster's salamander has an S1 rating for Georgia (NatureServe 2003) and occurs in moist forests near rocky streams. This species, which is rare in Georgia, probably occurs within riparian areas within the park (Whit Gibbons 2003, Savannah River Ecology Laboratory and University of Georgia, personal communication).

Bald eagles are considered water-dependent raptors typically found near estuaries, lakes, rivers, and oceans. Their distribution is strongly influenced by the availability of suitable nest and perch sites near large, open water bodies. As of 1999, there were 48 known nest sites in Georgia (<http://www.gwf.org/protectedanimals.htm>). Bald eagles may migrate to secure a sufficient food supply and the southern states provide important wintering and foraging areas for eagles from other regions. Data from *Bald Eagle (Southeastern) Recovery Plan* USDI Fish and Wildlife Service (1985) indicates that Chattahoochee River NRA has potential habitat for this species. Foraging bald eagles have been reported in the area of Chattahoochee River NRA and the Gold Branch Unit.

Open-ground whitlow-grass is a winter annual found on granitic outcrops, especially beneath widely scattered, old-growth eastern red cedar (*Juniperus virginiana*). Active management for this species is likely to be unnecessary; at individual sites, careful thinning of overstory vegetation may help to prevent succession and preserve populations. Since open-ground whitlow-grass occurs on granitic outcrops and none are known in the area of this project no potential habitat occurs.

Georgia aster is a relic species of post oak savanna/prairie communities that existed in the southeast prior to widespread fire suppression and extirpation of large native

grazing animals. It can occupy a number of dry upland sites (U.S. Fish and Wildlife Service 2000). Georgia aster occurs in the five counties surrounding or encompassing the park. Inter-specific factors such as competition and genetic isolation may be factors in the decline since small populations do not compete well without management assistance.

Monkey-face orchid is a perennial herb that occurs in red maple-blackgum swamps, along sandy, damp stream margins, or on seepy, rocky, thinly vegetated slopes. Common associates include green woodland orchid (*Platanthera clavellata*), white violet (*Viola primulifolia*), cowbane (*Oxypolis rigidior*), and grass-of-Parnassus (*Parnassia asarifolia*). Removal of sedimentation could benefit this species. The park has no records of this plant. Its preferred habitats are in riparian areas and at spring heads. Surveys for the presence of this species have indicated that this species is not present in area of this proposed project.

Bay star-vine can be found twining on the ground, subcanopy trees and shrubs in rich alluvial woods. The hardwood cove forest habitat and floodplain regions within the park contain suitable habitat. Park personnel have noted many occurrences of the bay star-vine in the park so the potential of this plant to occur at Gold Branch is high. Surveys for the presence of this species in the area to be disturbed have indicated that this species is not present.

Yellow lady slipper orchid, a showy perennial herb, is found in rich, moist hardwood coves and forests. A historical population was located within the park but has been extirpated by easement construction. Surveys for the presence of this species have indicated that this species is not present within the project area.

Indian olive is a small deciduous colonial shrub that tends to grow in dense clumps due to cloning and its partially parasitic habit. It can occur in dry open upland forests of mixed hardwood and pine (NatureServe 2003). Hand thinning of shading trees in its vicinity, if done carefully, may be beneficial to this species. *Nestronia umbellula* is rare throughout its range and has sustained significant habitat loss due to clearing of forest land, the park contains suitable habitat for this species (<http://georgiawildlife.dnr.state.ga.us/assets/documents/nestum.pdf>). Surveys in the area to be disturbed indicate that this species is not present.

Pink lady slipper orchid is listed as unusual in Georgia due to the potential threat from collection and lack of periodic wildland fires. It is listed as apparently secure for Georgia. *Cypripedium acaule* has a wide range in eastern Canada and the United States and is common in parts of this range. It is found in upland pine and mixed hardwood/pine forests with acidic soils. Threats include exploitation for horticultural or medicinal purposes and habitat loss in parts of its range (NatureServe 2003). It is vulnerable to competition from invasive nonnative plants and encroaching hardwoods due to the exclusion of wildland fire. It would likely benefit from correcting the sedimentation problem and thinning of invasives. Surveys in the area to be affected indicate it is not present.

Michaux's sumac is a low growing shrub found in rocky open woods. Like many dioecious species, it has been seriously impacted by habitat fragmentation. Half of all known historic locations of this species have been lost due to conversion to agriculture or urbanization and the loss of wildland fire in its habitat. No known individuals of this species occur within the area to be thinned or cleared.

**Methodology.** Information on the number of acres to be disturbed was used to estimate impacts. Other information was gathered from CRNRA documents and staff knowledge.

**Regulations and Policies.** Current laws and policies require that the following conditions be achieved in the park:

*Desired Conditions* – Federal-and state-listed threatened and endangered species and their habitats are sustained.

*Source* – Endangered Species Act; NPS Organic Act; NPS Management Policies.

### **Impacts of Alternative 1: No Action**

*Impact Analysis:* With the no-action alternative, no change in land use is expected minimizing the potential disturbance of listed species and their habitats.

The bluestripe shiner and high scale shiner are influenced by sedimentation, an indirect effect of re-grading an unstable road surface in riparian areas or the steep slopes found in the park. The gravel surface of the road is destabilized by storm water runoff, the very conditions that would wash sediments towards small tributaries and the river. However the drainage from the road is likely to go into Bull Sluice Lake. The National Park Service has determined that the no-action alternative *may effect, but is not likely to adversely affect the bluestripe shiner, and highscale shiner.*

The distributions of the four-toed salamander and Webster's salamander are patchy. Habitat on the park is believed suitable for the four-toed salamander and Webster's salamander. Neither has a protected legal status but both have been largely extirpated from Georgia due to habitat destruction. Under the no-action alternative effects would be negative localized, short-term, and negligible.

Since there are no known bald eagle wintering concentrations or nest sites within the project vicinity, no effects on this threatened species would be expected. Therefore, it is the determination of the National Park Service that the no-action alternative *may affect, but is not likely to adversely affect* the bald eagle or its habitat.

Open-ground whitlow-grass occurs on granitic outcrops, especially beneath widely scattered, old-growth eastern red cedar. This habitat does not occur downslope from the road therefore under the no-action alternative effects would be negligible. It is the

determination of the National Park Service that the no-action alternative *may affect, but is not likely to adversely affect* open-ground whitlow-grass or its habitat.

Although the park has reestablishment plots for Georgia aster at Gold Branch, these plots are along the easement right of way and not in the vicinity of the road. It is the determination of the National Park Service that the no-action alternative *may affect, but is unlikely to adversely affect* the Georgia aster or its habitat.

Golden seal, monkey-face orchid, bay vine-star, Piedmont barren strawberry, and yellow lady slipper occur in moist habitats. The down hill end of the road is in a disturbed easement. Continued deposition of gravels into depressions and downslope riparian areas would have a negative, negligible to minor localized affect on these species habitat. It is the determination of the National Park Service that the no-action alternative *may affect, but is not likely to adversely affect* monkey-face orchid, bay vine-star, pink and yellow lady slipper or their habitats.

#### Cumulative Impacts.

This alternative would result in a minor net increase of disturbed habitat over the next 5 years within the Chattahoochee River watershed. Species most likely to be affected by alteration of habitat are the Georgia species of concern Webster's salamander, four-toed salamander, monkey-face orchid, bay star vine, Piedmont barren strawberry, golden seal and yellow lady slipper. Cumulative impacts to Federal and Georgia state listed species from urbanization and changes in land use are major and negative. This alternative is likely to have a negative negligible contribution to the cumulative effects of habitat loss on these species.

### **Impacts of Alternative 2**

*Impact Analysis:* With the pave road alternative, a small change in land use is expected minimizing the potential disturbance of listed species and their habitats.

The bluestripe shiner and high scale shiner are influenced by sedimentation, an indirect effect of re-grading an unstable road surface in riparian areas or the steep slopes found in the park. Since the direct impacts of stabilizing activities on river and streams (see Water Resources above) with mitigation would be localized, short-term, and negligible, the direct and indirect impacts on these species would also be localized, short-term, and negligible. Mitigation in the form of erosion control and control of oil and contaminants from the road surface over time on areas adjacent to the river and its tributaries and avoidance of riparian areas would reduce potential impacts. The cumulative effects of sedimentation and resultant loss of habitat on these species has caused a decline in both these species. By employing mitigation to control erosion and resulting sedimentation, NPS will not contribute to the decline of these species. The National Park Service has determined that Alternative Two *may effect, but is not likely to adversely affect the bluestripe shiner, and highscale shiner.*



The distributions of the four-toed salamander and Webster's salamander are patchy. Habitat on the park is believed suitable for the four-toed salamander and Webster's salamander. Neither has a protected legal status but both have been largely extirpated from Georgia due to habitat destruction. The direct effects of constructing a containment area for storm water management could include the loss of habitat for some individuals. Therefore the expected effects would be negligible, localized and long term.

Since there are no known bald eagle wintering concentrations or nest sites within the project vicinity, no effects on this threatened species would be expected. The National Park Service has determined that Alternative Two *may affect, but is not likely to adversely affect the bald eagle*.

Open-ground whitlow-grass occurs on granitic outcrops, especially beneath widely scattered, old-growth eastern red cedar. This habitat does not occur downslope from the road therefore under the pave road alternative effects would be negligible. It is the determination of the National Park Service that Alternative Two *may affect, but is not likely to adversely affect* open-ground whitlow-grass or its habitat.

Although the park has reestablishment plots for Georgia aster at Gold Branch, these plots are along the easement right of way and not in the vicinity of the road. It is the determination of the National Park Service that Alternative Two *may affect, but is not likely to adversely affect* the Georgia aster or its habitat.

Golden seal, monkey-face orchid, bay vine-star, Piedmont barren strawberry, and yellow lady slipper occur in moist habitats. The down hill end of the road is in a disturbed easement. Surveys along Lower Roswell Road and along the existing entrance road and easement indicate that these species do not occur. It is the determination of the National Park Service that the Alternative Two *may affect, but is not likely to adversely affect* monkey-face orchid, bay vine-star, pink and yellow lady slipper or their habitats.

#### Cumulative Impacts.

This project would result in a very minor net increase of impervious surface within the Chattahoochee River watershed. The project as designed would likely not contribute to the cumulative effects of urbanization and storm water drainage problems. Habitat should improve for the Georgia species of concern Webster's salamander, four-toed salamander, monkey-face orchid, bay star vine, Piedmont barren strawberry, golden seal and yellow lady slipper. Cumulative impacts to Federal and Georgia state listed species from urbanization and changes in land use are major and negative.

## FLOODPLAINS AND WETLANDS

The Gold Branch entrance road is above most of the floodplain of the Chattahoochee River. However over land flows and downslope movement of gravel from the road

surface have the potential to damage the floodplain. Gravel and sediments cover the ground downhill from the road and have partially filled a wetland. Executive Order 11988 directs that, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains is to be avoided wherever there is a practicable alternative. There is an exception to this EO for projects, such as this one, involving entrance, access and internal roads to or within existing units of the National Park system. This exception was published in the Federal Register on May 28, 1980, Vol 45, No 104, Section 5, B2c, page 35918. Therefore, no Statement of Findings regarding floodplains is required. Gravel and sediments move off the road surface during storm events.

### **Alternative 1. No Action**

There would be no increased impact to the floodplain. Existing human-caused alterations to and developments on the floodplain would continue with no change in scope. Gravel and sediments would continue to move downhill towards wetland areas, streams and the river. An adverse long-term minor effect would occur with this alternative.

#### **Cumulative Effects**

This project would result in no increase in impervious surface within the Chattahoochee River watershed. However, increased sedimentation due to an unstable road surface could affect the floodplain and associated wetlands. Cumulative effects of increasing impervious surfaces in the floodplain from other sources are major, regional, negative and long term.

This alternative would not result in impairment of floodplain or wetlands.

### **Alternative 2. Pave existing roadbed**

There would be a net increase of approximately 11,000 square feet of impervious surface within the watershed above the floodplain. This would have a negative long term negligible effect on the floodplain. The scope of the road would remain largely unchanged and there would be no new effects on long- or short-term occupancy of the floodplain. The drainage structures and holding basin would likely mitigate the negative effects of increasing the impervious surface on the floodplain. In addition stabilizing the road surface should halt the downhill movement of sediments and gravel in to the floodplain and its associated wetlands and streams. This would result in a beneficial minor long term effect on the floodplain and associated wetlands and tributaries.

#### **Cumulative Effects**

This project would result in a negligible increase of impervious surface within the Chattahoochee River watershed. Cumulative effects of increasing impervious

surfaces in the floodplain from urbanization are major, regional, negative and long term.

This alternative would not result in impairment of floodplain or wetlands.

## **SOLID AND HAZARDOUS WASTES**

### **Affected Environment**

The entrance road at Gold Branch has failed many times in the past. Gravel and sediments move off the road surface during storm events. This material covers the ground downhill from the road and has partially filled a wetland.

### **Alternative 1. No Action**

The continual input of gravel onto the road after washouts contributes unwanted gravel to the down-slope areas. The gravel is not hazardous waste but it is a solid waste that is difficult and expensive to remove once it has moved off the road bed. Effects of solid wastes are negative, minor, long-term, and localized under this alternative

#### **Cumulative Impact**

The effects of solid wastes throughout the region are major, long term, and negative. The waste from this alternative would contribute a negligible amount of solid wastes to the region.

### **Alternative 2. Pave existing roadbed**

Gravel on the current road would be transported to the parking area where grading would prevent the down slope movement of the gravel. Therefore, no solid or hazardous wastes would result. The effects of solid wastes would be negligible, short term and localized.

#### **Cumulative Impact**

The effects of solid wastes throughout the region are major, long term, and negative. The waste from this alternative would contribute a negligible amount of solid wastes to the region.

## **RECREATION RESOURCES**

The Gold Branch Unit of the Chattahoochee River National Recreation Area is open to year-round public use. A range of visitor activities, including hiking, fishing, and wildlife viewing is available at Gold Branch.

### **Alternative 1. No Action**

If no action is taken, it is likely that the road would continually wash out. If this were to occur, access would be limited to those visitors wishing to walk into the trailhead. If the road washes out, access for persons with disabilities would be more difficult or impossible. The effects of this alternative on Recreation Resources are negligible to minor, negative, long term and localized.

#### **Cumulative Effect**

The Chattahoochee River National Recreation Area provides one of the largest remaining green spaces in the Atlanta Area. Closing this unit due to washouts of the road contribute to the cumulative loss of natural areas for people to explore in the Atlanta region.

### **Alternative 2. Pave existing roadbed**

There would be temporary road closures and disruptions of visitor traffic during construction, but these would be of short duration. It is anticipated that the road would be totally closed for 5-10 days during construction. Impacts could be minimized by paving during the winter/spring months when visitation is lower, rather than during the busy summer season.

Repaving the road would assure continued vehicular access to the Gold Branch Unit for hikers and non-hikers alike, including persons with disabilities.

This project would not be expected to cause any change in the number of visitors to Gold Branch, except possibly during construction. The effects of this alternative on Recreation Resources are negligible to minor, beneficial, long term and localized.

#### **Cumulative Effect**

The Chattahoochee River National Recreation Area provides one of the largest remaining green spaces in the Atlanta Area. Improving access to this unit will contribute to the ability of the park to provide ready access to parking and trail heads.

## **CULTURAL RESOURCES**

The section of the Gold Branch Unit of Chattahoochee River National Recreation Area included in the scope of this project has no known cultural resources (Cultural Resources Overview 1999, Archeological Survey Proposed Fuel Reduction Areas

2004)). Half the project area is confined within the holding walls alongside the road. The rest of the area is either within the current road footprint or within the disturbed area along Roswell Road Right of Way.

### **Alternative 1. No Action**

If no action is taken, it is likely that the road would continually wash out and erode areas below the road. The effects of this alternative on unknown Cultural Resources downslope are negligible, negative, long term and localized.

#### **Cumulative Effects**

Cumulative effects on Cultural Resources from this alternative would be negative, negligible and localized. Region wide loss of archeological and historical sites on private and public lands has been substantial. Recently, throughout the region private land clearing and altered overland flow of storm waters has had an adverse major long term effect on cultural resources. This alternative will not contribute to the degradation of known cultural resources.

### **Alternative 2. Pave existing roadbed**

Paving the road surface would stabilize the road and channel water. Providing drains would control storm runoff and taken together with the stabilized road would halt the erosion currently occurring. The direct beneficial effects of road paving on soils would translate into a beneficial localized, long-term, and negligible effect on cultural resources. No adverse effect on Cultural Resources is expected from this project.

#### **Cumulative Effects**

Cumulative effects on Cultural Resources would be negligible positive and localized. Region wide loss of archeological and historical sites on private and public lands has been substantial. Recently, throughout the region private land clearing and altered overland flow of storm waters has had an adverse major long term effect on cultural resources. This project will not contribute to the degradation of known cultural resources.

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## **PREPARERS**

This Environmental Assessment of the Gold Branch Road Paving Proposal was prepared for the National Park Service by Dr. Nina Hemphill of Chattahoochee River National Recreation Area, Division of Science and Resource Management.

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## LIST OF PERSONS AND AGENCIES CONSULTED

This environmental assessment was prepared in consultation and coordination with the following members of the park staff: Richard Lutz, David Ek, Charles Jackson, Leroy Stubblefield, David Lairson, Steve Reynolds, Tim Davis. This EA will be posted on the Webpage for the Chattahoochee River National Recreation Area ([www.nps.gov/chat/](http://www.nps.gov/chat/)) under Management Docs and will be available at park Headquarters upon request. Notice of the proposed action would be posted in the Gold Branch Unit.

Additional consultation has been with the following individuals:

Ernest Garcia USDA Forest Service Southern Region Wildlife Program Leader  
Cherry Green, Threatened and Endangered Species Coordinator, wetlands specialist  
SER NPS

The following were sent a copy of the EA:

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Section 106 documents have been prepared for the Georgia State SHPO, Ray Luce

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## **FIGURES**

Figure 1. Park Overview.

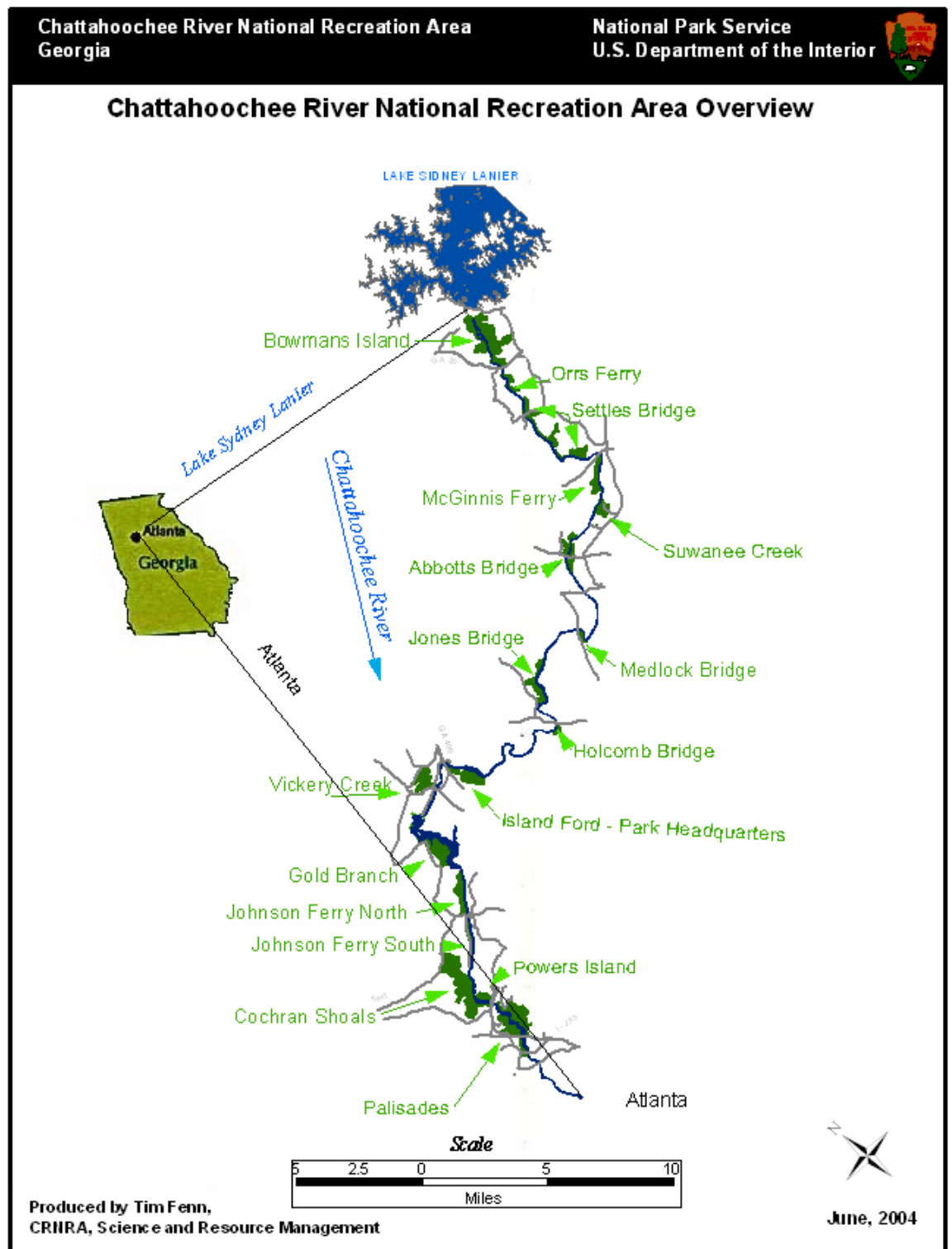




Figure 2: Entrance Road of Gold Branch Unit- Alternative One

## Gold Branch Alternative 1- No Action



Figure 3: Entrance Road of Gold Branch Unit- Alternative Two

Gold Branch  
Alternative 2- Pave, Thin  
and Construct storm water basin



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## REFERENCES

Documentation of Regulatory Survey: Road and Drainage Improvements to Gold Branch Entrance Road August 6, 2004 by David Lairson.

Archeological Survey of areas of proposed for fuel reduction areas, Chattahoochee River National Recreation Area Cobb, Forsyth, Fulton, and Gwinnett Counties, Georgia Final Report, April 2004, R.S. Webb & Associates

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